

**Listings and Amendments to the Claims**

This listing of claims will replace the claims that were published in the PCT Application and annexed to the International Preliminary Report on Patentability:

1. (currently amended) Device for generating a look-up table for a given value ( $\text{VAL}$ ) of a parameter ( $\text{APL}$ ) among  $N$  different values, whose output values can be approximated by a piecewise linear function of a variable ( $S(\text{VAL})$ ) depending on the given value, the set of  $N$  values being divided into  $P$  subsets of consecutive values, each piece of the piecewise linear function being in a different subset, wherein characterized in that it comprises:

- a first memory ( $101$ ) for storing, for each subset  $i$ , a primary look-up table ( $\text{PMTG}_i$ ) associated to a bound value of the subset  $i$ ,

- a second memory ( $102$ ) for storing, for each subset  $i$ , a delta look-up table corresponding to the difference between a secondary look-up table ( $\text{SMTG}_i$ ) and the primary look-up table ( $\text{PMTG}_i$ ) related to the subset  $i$ , the secondary look-up table ( $\text{SMTG}_i$ ) being associated to the other bound value of the subset  $i$ ,

- a third memory ( $103$ ) for storing, for each of said  $N$  values, an index indicating which primary look-up table in the first memory ( $101$ ) and which delta look-up table in the second memory ( $102$ ) have to be used for extrapolation,

- a fourth memory ( $104$ ) for storing an extrapolation coefficient ( $C$ ) for each one of said  $N$  values, the extrapolation coefficient ( $C(\text{VAL})$ ) associated to a given value being defined in accordance with the value ( $S(\text{VAL})$ ) of a variable  $S$  for said given value ( $\text{VAL}$ ) and the values ( $S(\text{PMTG}_i), S(\text{SMTG}_i)$ ) of the variable  $S$  for the two bound values of the subset  $i$  comprising said given value; and

- a computing block ( $105$ ) for generating a look-up table, for the given value ( $\text{VAL}$ )—in accordance with the related extrapolation coefficient ( $C(\text{VAL})$ ), primary look-up table ( $\text{PMTG}_i$ ) and delta look-up table.

2. (currently amended) Device according to claim 1, wherein characterized in that the parameter is an average power level and the variable ( $S(VAL)$ ) is a number of sustain pulses corresponding to the given value ( $VAL$ ) of the parameter

and that it generates a Metacode look-up table is generated for each average power level value.

3. (currently amended) Device according to claim 2, wherein characterized in that the bound level related to the primary look-up table ( $PMTCi$ ) of a subset of average power level values is the highest average power level value of the subset and the bound level related to the secondary look-up table ( $SMTCi$ ) of a subset of average power level values is the lowest average power level value of the subset.

4. (currently amended) Device Method according to one of the claims 1 –to–3, wherein characterized in that the ratio between the value ( $S(PMTCi)$ ) of the variable for one bound value in the subset i and the value ( $S(PMTCi+1)$ ) of the variable for the same bound value in the subset  $i+1$  equals to a fixed parameter  $\alpha$ .

5. (currently amended) Device according to the claim 4, wherein characterized in that the parameter  $\alpha$  is defined as followed :  $\alpha = \sqrt[n]{\frac{S_{MAX}}{S_{MIN}}}$

where  $S_{MAX}$  is the value of the variable ( $S$ ) for a peak white image and  $S_{MIN}$  for a full white image.

6. (currently amended) Device according to ~~one of the claims 1 to 5, wherein characterized in that~~ the extrapolation coefficient ( $C(VAL)$ ) equals to :

$$C(VAL) = \frac{S(VAL) - S(PMTC_i)}{S(SMTC_i) - S(PMTC_i)}$$

where -  $S(PMTC_i)$  is the value of the variable for the highest bound value of the subset i;

-  $S(SMTC_i)$  is the value of the variable for the lowest bound value of the subset i; and

-  $S(VAL)$  is the value of the variable for the given value.

7. (currently amended) Device according to ~~one of the claims 1 to 6, wherein characterized in that~~ the computed look-up table equals to the sum of the output of the primary look-up table ( $PMTC_i$ ) for the given value ( $VAL$ ) and the output of the delta look-up table ( $PMTC_i$ ) for the given value ( $VAL$ ) weighted by the extrapolation coefficient for the given value ( $VAL$ ).